

Abstract Submitted  
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**Inter-machine scalings of plasma filament electromagnetic features** M. SPOLAORE, N. VIANELLO, M. AGOSTINI, R. CAVAZZANA, G. DE MASI, E. MARTINES, B. MOMO, A. SCAGGION, P. SCARIN, S. SPAGNOLO, G. SPIZZO, M. ZUIN, Consorzio RFX, Associazione Euratom-ENEA sulla Fusione, Padova, Italy, I. FURNO, F. AVINO, A. FASOLI, C. THEILER, CRPP, EPFL, Association Euratom Suisse, Lausanne, Switzerland, D. CARRALERO, J.A. ALONSO, C. HIDALGO, EURATOM-CIEMAT Association, Madrid, Spain — Electromagnetic features of turbulent filaments, emerging from turbulent background, have been studied in four different magnetic configurations: the stellarator TJ-II, the Reversed Field Pinch RFX-mod, a device that can be operated also as a ohmic tokamak, and the Simple Magnetized Torus TORPEX. In all cases, direct measurements of both field-aligned current density and vorticity were performed inside the filament. The inter-machine comparison revealed a clear dependence of the filament vorticity upon the local time-averaged ExB flow shear. Furthermore, a wide range of local beta was explored allowing concluding that this parameter plays a fundamental role in the appearance of filament electromagnetic features.

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